

AMENDMENTS TO THE CLAIMS

1-121. (canceled)

122. (currently amended): A microdevice, which microdevice comprises:

- a) a substrate;
- b) a photorecognizable coding pattern on said substrate; and
- c) a binding partner on a surface of the microdevice that is capable of binding to a

moiety to be manipulated,

wherein said photorecognizable coding pattern comprises a hole not penetrating through the entire depth of said substrate,

~~and wherein said microdevice comprises a magnetic material;~~

and said microdevice has dimensions from about 1 to about 500 microns, and does not comprise an anodized metal surface layer;

wherein the substrate comprises a silicon layer and a metal layer;

and the metal layer comprises a patterned magnetic material.

123. (previously presented): The microdevice of claim 122, wherein the magnetic material comprises nickel.

124. (previously presented): The microdevice of claim 122, wherein the magnetic material comprises CoTaZr alloy.

125. (previously presented): The microdevice of claim 122, wherein the patterned magnetic material is an encoding feature.

126. (previously presented): The microdevice of claim 122, wherein the substrate comprises a silicon layer and a metal layer, and said silicon is silicon dioxide or silicon nitride.

127. (currently amended) The microdevice of ~~claim 126, wherein the metal layer is an aluminum layer.~~ claim 122, wherein the photorecognizable coding pattern is in an encoding layer, and the metal layer comprising a patterned magnetic material is a different layer.

128. (currently amended): The microdevice of claim 126, wherein the metal layer comprises a magnetic ~~material~~ alloy.

129. (previously presented): The microdevice of claim 126, wherein the metal layer comprises nickel metal or CoTaZr (Cobalt-Tantalum-Zirconium) alloy.

130. (previously presented): The microdevice of claim 126, wherein the silicon is silicon dioxide.

131. (previously presented): The microdevice of claim 126, wherein the thickness of the substrate is from about 1 micron to about 10 microns.

132. (previously presented): The microdevice of claim 130, wherein the substrate is a rectangle having a surface area from about 10 squared-microns to about 10,000 squared-microns.

133. (previously presented): A microdevice, which microdevice comprises:
a) a substrate;
b) a photorecognizable coding pattern on said substrate; and
c) a binding partner that is capable of binding to a moiety to be manipulated, wherein the binding partner is coated on a surface of the microdevice;

wherein said photorecognizable coding pattern comprises a hole not penetrating through the entire depth of said substrate,

and wherein said binding partner comprises a cell, a cellular organelle, a virus, or an antibody,

and said microdevice has dimensions from about 1 to about 500 microns, and does not comprise an anodized metal surface layer;

wherein the substrate comprises a silicon layer and a metal layer

wherein the metal layer comprises nickel metal or CoTaZr (Cobalt-Tantalum-Zirconium) alloy.

134. (previously presented): The microdevice of claim 133, further comprising a detectable marker or a molecular tag.

135. (previously presented): The microdevice of claim 133, wherein the detectable marker is a dye, a radioactive substance or a fluorescent substance.

136. (previously presented): A kit for manipulating a moiety, which kit comprises:

- a) the microdevice of claim 133, and
- b) a chip on which a moiety-microdevice complex can be manipulated.

137. (previously presented): An array for detecting moieties, which array comprises a plurality of microdevices placed or immobilized on a surface, wherein each of said microdevices is a microdevice of claim 133.

138. (previously presented): The microdevice of claim 133, wherein the thickness of the substrate is from about 1 to about 200 microns.

139. (previously presented): The microdevice of claim 133, wherein the thickness of the substrate is from about 1 to about 50 microns.

140. (new) The microdevice of claim 122, which comprises a plurality of encoding layers.

141. (new) The microdevice of claim 140, wherein the metal layer comprising a patterned magnetic material comprises one encoding layer, and the photorecognizable encoding pattern is comprised in another encoding layer.

142. (new) The microdevice of claim 122, further comprising an orientation marker.

143. (new) The microdevice of claim 140, further comprising an orientation marker.